INTEGRATED READ-ONLY MEMORY, METHOD FOR OPERATING SAID READ-ONLY MEMORY AND PRODUCTION METHOD

PRIORITY AND CROSS REFERENCE TO RELATED APPLICATIONS

[0001]   This application is related to and claims the benefit of priority under 35 U.S.C. §§ 120, 365, and 371 to Patent Cooperation Treaty patent application no. PCT/EP03/01583, filed on February 17, 2003, which was published at WO 03/075350, in German.

[0002]   This application is further related to and claims the benefit of priority of February 21, 2002 under 35 U.S.C. § 119 to German patent application no. DE 102 07 300.7, filed on February 21, 2002.

BACKGROUND OF THE INVENTION

1. Technical Field.

[0003]   The invention relates to an integrated read-only memory, a method for operating said read-only memory and a method for producing an integrated read-only memory.

2. Related Art.

[0004]   As the integration density in microelectronics increases, the demand for large-scale integrated read-only memories is also increasing. These memories are used for example for on-chip storage of audio, graphics or video data.

[0005]   Read-only memories are distinguished by the fact that the memory content is preserved even when the operating voltage is switched off. Such read-only memories are, in particular, also of programmable design (PROM). Programmable components therefor are for instance fuses, diodes or, alternatively, special MOSFETs having an additional so-called floating gate. The latter is charged during programming and thereby shifts the threshold voltage of the MOSFET. Since the floating gate is insulated all around with SiO_2, the charge retention can be guaranteed for approximately ten years.